



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 10/663,655 | 09/17/2003 | Yong-Chen Chung | LOU 111 | 3805 |
| 7590 | 08/16/2006 | | EXAMINER | |
| RABIN & BERDO, P.C. | | | NGUYEN, THU KHANH T | |
| Suite 500 | | | | |
| 1101 14th Street N.W. | | | ART UNIT | PAPER NUMBER |
| Washington, DC 20005 | | | 1722 | |

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/663,655 | CHUNG ET AL. | |
| | Examiner | Art Unit | |
| | Thu Khanh T. Nguyen | 1722 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 August 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al (5,558,015) in view of Chou (6,482,742).

Miyashita et al teach a hot press for producing printed board, comprising a first and second mold bolster, or a pressing unit and a carrier unit (6, 7), each unit having a heating mold plate (11a, 11b) and a pressure vessel (38), which is equivalent to the parallelism adjustment mechanism and is made of a thin, flexible film that is connected watertight at its peripheral edge (col. 5, lines 31-56) and filled with a fluid medium (37) for heating and transferring an uniform pressure onto a substrate (40) of the molding material, and a driving unit (3) for moving the mold bolster.

Miyashita et al fails to disclose that the mold has an imprint surface.

Chou discloses fluid pressure imprint lithography, comprising an upper mold (11) with an imprinted surface (12) for creating a pattern on a moldable thin film substrate (21).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Miyashita et al by providing a pressing surface having imprint pattern as taught by Chou, because the imprint pattern will form a pattern on the substrate during the compression of the upper and lower mold plates.

In regard to claims 2-3, wherein the pressure vessel is located between the substrate (40) and the upper and lower mold plates (11a, 11b).

In regard to claim 4, Miyashita et al further discloses that the pressure vessel is made of fluoro-rubber (col. 5, lines 44-47).

In regard to claim 5, the pressure vessel (38) further comprises pressure sensors (42a-b; col. 5, lines 56-59).

In regard to claim 6, wherein the mold bolsters, or mold carrier units are mounted on an alignment plate (2A) for alignment the mold bolsters during compaction.

In regard to claim 7, wherein the driving unit (3) is a transmission unit composed of a hydraulic cylinder (5) connected to a power source, which is equivalent to a motor.

In regard to claim 10, the mold and the substrate are inherently subjected to a mechanical force as the mold bolsters (6, 7) move closer and press on each other.

In regard to claims 11 and 12, the apparatus further comprises a heating members (31), a heating medium (37), and a cooling members (32) for regulating the temperature of the printed board.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al ('015) in view of Chou ('742) as applied to claims 1-8, and 10-12 above, and further in view of Gorczyca et al (6,787,071).

Miyashita et al disclose an imprint apparatus as described above, but fails to disclose an anti-adhesion coating layer on the mold surface.

Gorczyca et al disclose a stamper comprising a molding surface (21, 22) having surface-finishing layer such as lubricant layer (col. 7, lines 23-25) or a Teflon layer (col. 4, lines 46-47).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Miyashita et al by providing a surface finishing layer such as lubricant or non-stick material as taught by Gorczyca et al in order to facilitate the removal of the finished product after printing.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 5-8, and 10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,994,541. Although the conflicting claims are not identical, they are not patentably distinct from each other because the combination of claims 1-9 cover all the claimed limitations of current claims 1, 5-8 and 10.

6. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN



YOGENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1739